

Patent

HM-244DIV

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Günter Knepe, et al.
Serial No.: not yet known (Divisional of 09/177,300)
Filed: concurrently herewith
For: HIGH-SPEED SHEAR FOR TRANSVERSELY CUTTING
 ROLLED STRIP

Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

S I R:

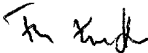
Prior to issuing an Office Action, please amend the above-identified application as follows:

IN THE CLAIMS

Delete claims 1 - 23 and substitute therefor the enclosed new claims 24 - 34.

Respectfully submitted,

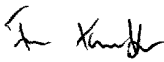
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Friedrich Kueffner Reg. No. 29,482
342 Madison Avenue
Suite 1921
New York, N.Y. 10173
(212) 986-3114

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Friedrich Kueffner

New Claims

24. A high-speed shear comprising a knife drum and a counter-drum located opposite the knife drum, at least one knife having a knife cutting edge mounted on the knife drum, at least one drive unit for accelerating the drums to a speed corresponding to a feeding speed of a rolled strip to be cut, and at least one adjusting device for adjusting the drums relative to each other for carrying out a cut, the knife drum having a cutting circle, wherein the knife is mounted so as to protrude beyond the cutting circle towards the counter-drum, and wherein the knife is mounted so as to be resiliently supported with a predeterminable restoring force against at least one spring element, wherein the knife is mounted so as to be resiliently supported in a radial guide means against a gas pressure spring.

25. The high-speed shear according to claim 24, wherein the knife is a chisel-type knife.

26. The high-speed shear according to claim 24, wherein the counter-drum has a surface portion acting as an anvil and interacting with the knife.

27. The high-speed shear according to claim 24, wherein the adjusting device receiving the knife drum with a bearing thereof is mounted so as to be supported by a pneumatically or hydraulically yielding receiving means.

28. The high-speed shear according to claim 24, further comprising another adjusting device for adjusting at least one of a travel and a progressiveness of the gas pressure spring.

29. The high-speed shear according to claim 24, comprising means for synchronizing the circumferential speeds of the drums with each other for maintaining a defined cutting gap between the knife and the counter-drum and for synchronizing the circumferential speed of the drums with the strip feeding speed.

30. A high-speed shear comprising a knife drum and a counter-drum located opposite the knife drum, at least one knife having a knife cutting edge mounted on the knife drum, at least one drive unit for accelerating the drums to a speed corresponding to a feeding speed of a rolled strip to be cut, and at least one adjusting device for adjusting the drums relative to each other for carrying out a cut, the knife drum having a cutting circle, wherein the knife is mounted so as to protrude beyond the cutting circle towards the counter-drum, and wherein the knife is mounted so as to

be resiliently supported with a predeterminable restoring force against at least one spring element, wherein the knife is mounted so as to be supported against a hydraulic liquid column interacting with a pressure reservoir.

31. The high-speed shear according to claim 30, wherein the knife is a chisel-type knife.

32. The high-speed shear according to claim 30, wherein the counter-drum has a surface portion acting as an anvil and interacting with the knife.

33. The high-speed shear according to claim 30, wherein the adjusting device receiving the knife drum with a bearing thereof is mounted so as to be supported by a pneumatically or hydraulically yielding receiving means.

34. The high-speed shear according to claim 30, comprising means for synchronizing the circumferential speeds of the drums with each other for maintaining a defined cutting gap between the knife and the counter-drum and for synchronizing the circumferential speed of the drums with the strip feeding speed.